

**REMARKS/ARGUMENTS**

The foregoing amendments and these remarks are responsive to the final Office Action of May 14, 2003. Favorable reconsideration and allowance of the present application is respectfully requested in view of the foregoing amendments and these remarks.

**Background**

The applicant does not dispute that the prior art discloses the concept that plastic film has been stretched beyond its yield point and then relaxed before being rolled up onto a storage roll for later use. Stretching in this way in the prior art has been for the purpose of lengthening and thinning the film such that more usable film length is achieved from a given volume of plastic material. Stretching the film in this way will normally leave in the film: a degree of memory (i.e., an ability to recover plastic (permanent) deformation), and a degree of elasticity (i.e., an ability to recover elastic deformation). The intention with partially relaxing the stretched film in the prior art is such that a degree of memory and elasticity is left in the film such that when it is applied to a load (i.e., wrapped around a desired object or objects), it has an initial constricting force (elasticity) and will also further constrict over time (memory). The reason why partial relaxation of the film is undertaken is that unless this occurs, the film is difficult to actually apply to loads during a wrapping use and moreover, if it is applied to a core to be stored in an unrelaxed state, it is likely to crush the core before it can be used.

Conventional relaxation of a film results in quite substantial variations in the degree of relaxation across the transverse dimension of the film web. That is, both opposed edge regions of the film web tend to relax significantly more than the central zone of the film web. This practical effect is of little concern in the prior art disclosures since they are generally concerned with the length and thickness of the film to ensure it is economically suitable for a wrapping application and also that it has a general elasticity / memory capability for its end use.

The applicant respectfully submits that if a prior art document discloses simply that a film is relaxed after stretching beyond its yield point, then it discloses the above-discussed conventional relaxation of such films where the degree of relaxation varies across the transverse

width of the film. Stated differently, the applicant respectfully submits that if the prior art document does not positively disclose that the relaxation is uniform across the traverse width (which is achievable only by taking special measures), then simply describing relaxation does not disclose uniform relaxation across the transverse width.

#### The Present Invention, Generally

An aspect of the present invention includes properties of plastics material, such as resistance to air penetration or UV stability. Accordingly, it is important for the relaxation of the plastics material to be such that the degree of relaxation is substantially uniform across its cross-section transverse to the stretching direction, so that the resistance to air penetration and/or UV stability is uniform across the plastics material's transverse width. This is important because it would be of no value to have a portion of a film web air tight if another portion is going to leak like a sieve in regard to air passage. The same comment of course also applies to resistance to UV degradation.

#### The Office Action's Anticipatory Rejection

The Office Action rejects Claims 2, 5-9, 11, 12, 15, 16, 18-24, 26 and 27 as being anticipated by WO 98/50219 to Johnstone, who happens to be the present applicant. The applicant respectfully disagrees with this rejection for at least the several reasons presented below.

#### First / Uniform Relaxation

WO 98/50219 does not anywhere teach or suggest that the relaxation of the film is uniform across its transverse width, and this deficiency in WO 98/50219 is in stark contrast to the recitation in each of the independent claims of the present application, Claims 2, 9, 11, 15, 18, 26 and 27, that the plastics material is substantially uniformly relaxed across its transverse

cross-section. Uniform relaxation did not occur with the subject matter of WO 98/50219 nor was there any reason for uniform relaxation to occur with respect to WO 98/50219.

The Office Action appears to be arguing that because WO 98/50219 refers to relaxation generally, then it is inherent in WO 98/50219 that the plastic film is substantially uniformly relaxed across its transverse cross-section. The applicant respectfully disagrees, because the relaxation disclosed by WO 98/50219 is certainly not uniform. Accordingly, and reiterating from applicant's response to the prior Office Action, it is noted that the burden of showing inherency is upon the Patent Office. However, the Office Action does not make it clear, for example, why the indication in independent Claims 2, 9, 11, 15, 18, 26 and 27 that the plastics material is substantially uniformly relaxed across its transverse cross-section is inherent in the teachings of WO 98/50219, as will be discussed in greater detail below. Inherency cannot be based on mere possibilities. Accordingly, the applicant respectfully requests that the Examiner substantiate her determination of inherency by providing documentary evidence.

#### Second / Range of Relaxation

WO 98/50219 discloses that the partial relaxation is such as to retain between 20% and 80% of the elastic deformation but does not refer to the memory recovery that will occur in the short term as well as over the longer term. In contrast, independent Claims 2, 9, 11, 15, 18, 26 and 27 indicate that the relaxation that occurs is between 5 and 20% of its total stretched length, which includes the immediate plastic recovery (memory) as well as the elastic recovery. Thus, the relaxation range recited in each of the independent Claims 2, 9, 11, 15, 18, 26 and 27 is wholly outside the range disclosed in WO 98/50219 and there is no overlap between the two.

Of course WO 98/50219 does not teach or suggest that relaxing the film between 20% and 80% of its elastic deformation would result in improved resistance to UV degradation or decreased oxygen permeability. While there may have been some improvement in the relevant capability with film treated according to WO 98/50219, the applicant respectfully submits that a significantly improved level of these capabilities is achieved by treating the plastics material as recited by the independent claims of the present application. Reiterating from above, it is further respectfully submitted that treating the plastics material as recited by the independent claims of

the present application (regardless of the improved capabilities issue) is neither taught nor suggested by WO 98/50219.

Third / Improved Resistance

Each of the independent claims has been amended, for purposes of clarification, to explicitly recite the improved resistance to oxygen or other gas transmissivity and/or improved resistance to degradation from UV light radiation, with the improved resistance being uniform across the transverse width of the plastics material (Claim 1) or across the transverse cross-section of the plastics material (Claims 9, 11, 15, 18, 26 and 27). Reiterating from above, these added recitations are neither taught nor suggested by WO 98/50219, and they are of significant commercial importance.

Regarding this commercial importance, it is noteworthy that the present Office Action indicates, on page 3, that "the Examiner takes the position that the wrapped bale of silage is inherently in an anaerobic atmosphere given that the stretched film is not gas permeable." However, those of ordinary skill in the art will appreciate that one layer of conventional stretched plastic film is in fact gas permeable. This is why it is conventional for a bale of silage to be wrapped in a number of layers of conventional plastic film. To make the point, if a bale is wrapped in enough layers of net material, eventually an anaerobic atmosphere will be created within the envelope. This of course is not a practical or commercial thing to do. The commercial benefit achieved by relatively decreasing gas permeability in accordance with some of the claims of the present invention is that relatively fewer layers of plastic film are required to create a silage bale thereby decreasing costs.

The Office Action's Obviousness Rejections

The Office Action respectively rejects Claims 2, 5-9, 11, 12, 15, 16, 18-24, 26 and 27 as being obvious over WO 94/04419 to Martin-Cocher et al. and WO 94/04419 in view of US 5,816,026 to Orphen et al. The applicant respectfully disagrees with these rejections for at least the several reasons identified below.

First / Uniform Relaxation

WO 94/04419 does not anywhere teach or suggest that the relaxation of the film is uniform across its transverse width, and this deficiency in WO 94/04419 is in stark contrast to the recitation in each of the independent claims of the present application that the plastics material is substantially uniformly relaxed across its transverse cross-section.

The Office Action appears to be arguing that because WO 94/04419 refers to relaxation generally, then it is inherent in WO 94/04419 that the plastic film is substantially uniformly relaxed across its transverse cross-section. The applicant respectfully disagrees, as will be discussed in greater detail below, and, reiterating from above, it is respectfully requested that the Examiner substantiate her determination of inherence by providing documentary evidence.

It is respectfully submitted that US 5,816,026 does not overcome the above-discussed deficiency in WO 94/04419.

Second / Range of Relaxation

WO 94/04419 discloses relaxation, but does not indicate that the relaxation is between 5 and 20% of its total stretched length. Nonetheless, the Office Action indicates that "it would have been obvious to one having ordinary skill in the art to optimize the amount of relaxation of the film given that Martin-Cocher specifically teach that the amount of film relaxing stabilizes the film and determines the increase in tearing resistance." However, US 5,797,240, which is a member of the same patent family as WO 94/04419, does not more specifically teach that the amount of film relaxing improves resistance to oxygen or other gas transmissivity and/or improves resistance to degradation from UV light radiation. Stated differently, Martin-Cocher does not teach or suggest obtaining the advantageous balance of properties of the present invention. Therefore, the applicant respectfully submits that if one of ordinary skill in the art were optimizing based upon the teachings of US 5,797,240 and WO 94/04419, the result would not be a relaxation of between 5 and 20% of total stretched length, which is recited in each of the independent claims of the present application. Indeed, it is respectfully submitted that Fig. 3A of US 5,797,240 does not illustrate a relaxation of between 5 and 20% of total stretched length.

It is respectfully submitted that US 5,816,026 does not overcome the above-discussed deficiencies in WO 94/04419.

Third / Improved Resistance

As mentioned above, each of the independent claims of the present application has been amended, for purposes of clarification, to explicitly recite the improved resistance to oxygen or other gas transmissivity and/or improved resistance to degradation from UV light radiation, with the improved resistance being uniform across the transverse width of the plastics material (Claim 2) or across the transverse cross-section of the plastics material (Claims 9, 11, 15, 18, 26 and 27). These added recitations are neither taught nor suggested by WO 94/04419, and they are of significant commercial importance.

It is respectfully submitted that US 5,816,026 does not overcome the above-discussed deficiencies in WO 94/04419.

The Office Action's Response to Arguments / Further Regarding Uniform Relaxation

The Office Action, on page 5, in section 5, indicates that in WO 98/50219 the relaxation stage is uniform across the film web width. Specifically, the Office Action indicates that "the film is placed on spools or nip rollers as seen in the Figures" and that therefore an equal amount of force is applied across the film. The applicant respectfully disagrees with this statement. WO 98/50219, at page 5, beginning at line 25, indicates that partial relaxation occurs between the rollers 7 and a wind up roller 9 (Fig 1) or 19 (Fig 3). In other words, relaxation occurs as the film web passes over the idler spools 10 in this zone. There is no disclosure of cooperating nip rollers in this relaxation zone. There is no disclosure anywhere in WO 98/50219 that equal pressure is applied across the film web during relaxation such that uniform relaxation could be achieved. Simply passing the film over spools according to the teaching of WO 98/50219 does not result in equal pressure being applied across the film web during relaxation; therefore, uniform relaxation could not be achieved.

The Office Action indicates, on page 6, at line 8, that Martin-Cocher et al. "also employ rollers for stretching and relaxing their film and hence, in this case again, an equal amount of force must be applied across the entire film". Figure 1 of Martin-Cocher et al. shows schematically apparatus for stretching the film from a roll 10 as it is passed between rollers 12 and 13 prior to being wound up on a mandrel 18. As is apparent from Figure 1, the stretched film is received immediately from roller 13 and quite clearly does not undergo any relaxation at this stage. Applicant acknowledges that Martin-Cocher et al. refers to relaxation, but based on the disclosure of Martin-Cocher et al., such relaxation could only occur either on the spool 18 or subsequent thereto, perhaps during application to a load.

Certainly Martin-Cocher et al. does not disclose relaxation on rollers, as alleged by the Office Action on page 6, at line 8. Even if Martin-Cocher et al. did generally disclose relaxation on rollers, applicant submits there is no basis in Martin-Cocher et al. for the Examiner to claim that simply passage over rollers must result in an equal amount of force being applied across the entire film. If in fact the film is relaxing as it is passed over rollers then it must be the case that equal pressure is not applied across the complete width of the film.

The Office Action's Response to Arguments / Pages 10 to 14 of Specification

In the Office Action's final paragraph on page 6, it appears to be acknowledged that the Specification of the present application shows that a significant improvement in the UV resistance and gas permeability characteristics is achieved by relaxing the film within the range of 5 to 20% of its total stretched length. However, the Office Action seems to diminish the importance of this improvement on the grounds that the specification of the present application does not disclose that beyond 20% relaxation the improvements are not achieved or are significantly reduced. It is respectfully submitted that, in order to patentably distinguish the present invention from the prior art, the applicant need not prove that the improvements are not achieved or are significantly reduced beyond 20% relaxation.

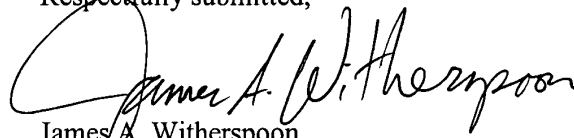
Indeed, it is respectfully submitted that all of the independent Claims 2, 9, 11, 15, 18, 26 and 27 respectively recite methods and apparatus that provide an improved balance of properties

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and are neither taught nor suggested by the known prior art. That is, it is respectfully submitted that, in view of the foregoing, it should be readily apparent that each of the independent Claims 2, 9, 11, 15, 18, 26 and 27 is in condition for immediate allowance. Likewise, it is respectfully submitted that each of the dependent Claims 5-8, 12, 16 and 19-24 are in condition for allowance because of their respective dependence from an allowable independent claim, and because the dependent claims further patentably distinguish the present invention.

In view of the foregoing, it is respectfully submitted that the present application is in condition for immediate allowance, and such action is solicited. If for some reason the Examiner deems that the present application is not in condition for immediate allowance, it is respectfully requested that she telephone the undersigned at 704-444-1184, in an effort to expedite prosecution.

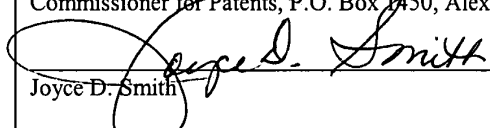
Respectfully submitted,

  
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